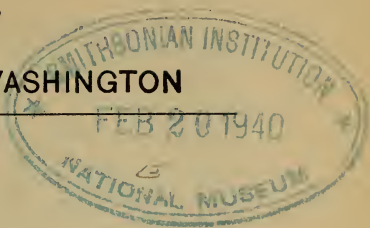


PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON



TWO NEW ASTERACEAE FROM THE CHARLESTON  
MOUNTAINS, NEVADA.

BY S. F. BLAKE.

The range of mountains in west-central Clark County, Nevada, known as the Charleston Mountains, the Spring Mountains Range, or the Spring Mountains (the last being the name approved by the U. S. Geographic Board), reaches in Charleston Peak an elevation of 3633 meters (11912 ft.).<sup>1</sup> Being an isolated mountain mass surrounded by deserts, the range naturally harbors a number of endemic or local plants. In 1916 the late Dr. H. M. Hall described two very distinct new Asteraceae, *Chrysothamnus gramineus* and *Tanacetum compactum*, from specimens collected in Lee Canyon, Charleston Mountains, in August, 1913, by A. A. Heller. The range of the former has since been extended to Death Valley, California, but the latter, which was made the basis of a new genus (*Chamartemisiasia*) by Rydberg, has not been found except in the region of the type locality. The botanical exploration of the Charleston Mountains has been actively prosecuted during the last three years by Mr. Ira W. Clokey of South Pasadena, California, and the two new Asteraceae here described are among the fruits of his work.

*Antennaria soliceps* Blake, sp. nov.

Herba perennis caespitosa, stolonibus brevibus decumbentibus foliosis; folia basalia et ea stolonum spatulato-obovata 6-9 mm. longa 2.5-4 mm. lata obtusa v. acutiuscula non calloso-mucronulata in basem petioliformem laminam aequantem abrupte v. sensim angustata utrinque dense albidotomentosa 1-nervia; caules 1-2 cm. alti erecti monocephali sicut folia tomentosa foliis 3-5 erectis donata, foliis imis lineari-oblongis v. spatulato-

<sup>1</sup>On the older maps the elevation of this peak is given as 10874 ft. (about 3314 m.), but the most recent measurement, made by means of vertical angles by the U. S. Coast & Geodetic Survey, makes the height 11912 ft.

oblongis non apiculatis, foliis superioribus linearibus v. anguste lanceolatis apice appendice scariosa oblonga obtusa glabra ca. 2 mm. longa infra nigrescenti-brunnea supra albida donatis; capitulum foemineum brevissime pedunculatum campanulatum maturitate 8–10 mm. alta ca. 60-flora; involucri ca. 5-seriati gradati 7–8.5 mm. alti appressi phyllaria oblonga 1–1.5 mm. lata obtusa v. late rotundata infra viridescencia albedo-tomentosa prope medium nigrescenti-maculata apice firme scariosa albida leviter brunneo- v. viridescenti-tincta interdum virescentia v. nigro-viridescencia; corollae fl. fem. supra saturate rubrae; achenia glabra.

Forming mats up to 45 cm. diam.; stolons prostrate with ascending tips, 1–2.5 cm. long, equably leafy throughout, their leaves densely whitish-tomentose beneath with moderately thick and at first slightly silky tomentum, above equally or sometimes less densely tomentose and then somewhat grayish, the earliest leaves of the stolons and those at base of stem sometimes glabrate or glabrescent in age; stem leaves 5–8 mm. long, 1–2 mm. wide, gradually reduced above, tomentose like the stolon leaves, or the upper rarely glabrescent, the upper 2–4 with conspicuous scarious appendages, an intermediate leaf sometimes bearing a subulate mucro about 0.6 mm. long; heads in young fruit (as pressed) 8–10 mm. high, 9–12 mm. thick, 60–64-flowered; phyllaries with erose tip, the outer phyllaries with large and conspicuous blackish-brown spot, this weak or obsolete on the inmost phyllaries; receptacle rounded, shallowly alveolate; pistillate corollas reddish above, 4.3–4.7 mm. long; achenes 1.5 mm. long; pappus white, 6 mm. long, of about 22–26 minutely hispidulous bristles deciduous in a ring.

NEVADA: Cliffs, north exposure, Charleston Mts., alt. 3355 m., 22 June 1926, *E. C. Jaeger* (herb. Pomona Coll.); gravelly open slope, growing with *Pinus aristata*, ridge near Charleston Peak, Charleston Mts., Clark Co., alt. 3350 m., 8 July 1937, *I. W. Clokey & R. Bean* 7459 (type no. 1,699,460, U. S. Nat. Herb.); same locality, alt. 3500 m., 8 Aug. 1935, *I. W. Clokey* 7776 (herb. Clokey); among broken rock at timberline, Charleston Peak, alt. 3500 m., 16 July 1936, *I. W. Clokey & Russell Bean* 7365 (U. S. Nat. Herb.)

A species of the *Antennaria media* group, distinguished by its comparatively large and solitary heads. It is apparently unique among the United States species of its immediate group in its regularly solitary heads. Mr. Clokey states that among hundreds of specimens examined only one was found with 2 heads and one with 3. It was observed only along a ridge from about 3200 m. (10500 ft.) almost to timberline at about 3505 m. (11500 ft.).

#### *Cirsium clokeyi* Blake, sp. nov.

Bienne unicaule 0.45–1.5 m. altum foliosum maxime armatum paene glabrum; caulis simplex validus cavus valde striatus; folia numerosa caulina linearia acuta sessilia breviter decurrentia semi- v. subpedalia pallide viridia subcoriacea alte pinnatifida, lobis ca. 20–28-jugis deltoideis v. quadratis 3–4-dentatis 4–10 mm. longis (spinis exclusis), dentibus acutis apice spina valida albida 6–17 mm. longa donatis margine inter dentes

breviter spinoso, rhachi foliorum inter lobos 5–7 mm. lata non armata; folia basalia similia sed breviter petiolata et brevius armata; capitula saepius 4–14 apice caulis racemosa breviter pedunculata interdum solitaria v. apice caulis aggregata et subsessilia late campanulata sicc. 5–5.8 cm. alta 3–6 cm. atla (bracteis exclusis); involucri flores subaequantis v. paullo longioris basi saepe folio reducto suffulti ca. 8–9 seriati 5–5.8 cm. alti phyllaria exteriora inter sese paullum gradata interiora valde superantia corpore lanceolato margine dense spinuloso spinis 3–9 mm. longis apice spina valida alba 2–3.5 cm. longa donato subglabro subherbaceo, interiora ca. 3-seriata parum gradata anguste lanceolata acuminata erecta margine ciliolata dorso dense et minute tuberculata infra apicem saepius macula lanceolata saturate viridi v. purpurascenti-viridi donata apice albido substramineo non spinoso; corollae pallide roseo-purpureae v. albidiae, tubo fauce duplo brevior, dentibus fauce paullo brevioribus.

Root vertical 10–12 cm. long, 1–2 cm. thick; stem greenish or purpletinged, 1–1.5 cm. thick below, erect, glabrous, strongly striate with rounded brownish ribs; internodes mostly 3–8 cm. long; lowest leaves crowded, linear, slightly tapering at both ends, short-petioled, 19–29 cm. long (including petiole, this about 4–6 cm. long), 3–5 cm. wide (including the spines), sparsely pilose on both sides, especially on costa, with lax jointed hairs or nearly glabrous, deeply pinnatifid with 20–28 pairs of mostly crowded often overlapping lobes, stiffly white-spinose and -spinulose, the lobes mostly 2–3 times as long as the breadth of the rachis between them, the costa broad, whitish on upper side, 3–6 mm. wide, the petioles sparsely spinulose or unarmed, broadened at base; stem leaves similar but sessile, gradually reduced above, more strongly spiny, decurrent for 0.5–1 cm. by a rounded clasping spiny base, this 3–6 mm. wide (excluding spines); upper leaves (subtending the heads) 5–18 cm. long, much surpassing or the upper about equaling the heads; peduncles 1-headed, 2–14 cm. long or occasionally suppressed, bearing a few very spiny much reduced leaves; outer phyllaries about 5-seriate, strongly spinose, the body lanceolate, about 10–13 mm. long, 3–4 mm. wide, sparsely pilose or pilosulous or essentially glabrous, greenish except at the whitish base, 1-costate or -vittate with the ridge not evidently glandular, densely short-spinulose on margin with somewhat fasciated white spines mostly 2–9 mm. long, tapering into a strong white spine 2–3.5 cm. long (spreading in the outermost phyllaries, ascending to erect in the inner), the inner with a thin arachnoid tomentum on margin near apex of body and there often with a lance-shaped dark green or purplish-green spot; inner phyllaries with body pale greenish and densely and finely tuberculate above, usually with terminal, lanceolate, dark green or purplish green spot, the attenuate, flattish, substramineous, whitish, ciliolate apex 4–6 mm. long; corollas whitish or pale rosy-purple, glabrous, 3.3 cm. long (tube 6.5–7 mm., throat slightly but definitely wider than the tube, 13–14 mm., teeth linear, subequal, obtusish, at apex slightly thickened dorsally and internally crested, 11.5–12.5 mm. long); anthers pale pink-purple, acuminate, the apex about 0.5 mm. long, the filaments strongly papillose on margin except toward apex; style with very obscure node, pink-purplish above; submature achenes obovate-oblong, glabrous, 6.5 mm. long;

pappus whitish, 1.8 cm. long, the bristles all plumose except at the merely hispidulous not thickened tip.

NEVADA: Head of Lee Canyon, Charleston Mountains, alt. 2950 m. (9700 ft.), 5 Aug. 1913, A. A. Heller 11068; brushy bottom and sides of ravine, Rainbow Falls, Charleston Mountains, alt. 2600 m., 24 July 1936, I. W. Clokey 7401; gravelly slope, Rainbow Falls, alt. 2670 m., 3 Aug. 1937, I. W. & C. B. Clokey 7455; canyon bottom and lower slope in yellow pine belt, Deer Creek, Charleston Mountains, alt. 2800 m., 27 July 1937, I. W. & C. B. Clokey 7454; on gravelly open slope with *Pinus aristata*, ridge near Charleston Peak, Charleston Mountains, Clark Co., alt. 3200-3350 m., 6 Aug. 1937, I. W. Clokey 7456 (type nos. 1,699,454-9, U. S. Nat. Herb.); same locality, 22 July 1937, I. W. Clokey 7457; stray plant by roadside, yellow pine belt, Charleston Park, Charleston Mts., alt. 2270 m., 11 July 1937, I. W. Clokey 7458 (herb. Clokey).

Allied to *Cirsium eatoni* (A. Gray) Robinson, but readily distinguished by its much larger heads and the much longer spines of the leaves and involucre, especially of the outer phyllaries. *Cirsium clokeyi* is, in fact, the most savagely armed of all the United States species of *Cirsium*. Mr. Clokey supplies notes on its occurrence from which I extract the following information:

"The natural habitat seems to be on dry ridges from 10500 ft. to timberline. Here the plants occupy open ground, scattered, usually fairly close to ledges and to *Pinus aristata*. Open grassy slopes seem to be out of their habitat. Some plants are reduced to a single head and a few were not over 18 inches tall. I have found this plant at four lower locations where it had apparently been carried down from the ridge. At Rainbow Falls it grows on hillsides, more or less scattered, in a limited area. The plants average somewhat larger than on the ridge. At Deer Creek the plants are found a short distance above the stream and on the lower slope. Usually scattered, in a few places they grow close together. The plants here evidently have more moisture and are up to about five feet tall with more numerous heads. At Little Falls (alt. 2500 m.) I found three or four plants and collected a specimen. In all the above stations no branching was observed. At Charleston Park, at an elevation of 7500 feet, a single plant was found. Worms had destroyed the main stalk and several branches had formed from near the base."